

Some Trigonometric Integrals:

1. $\int \tan x \, dx = \ln |\sec x| + C$

2. $\int \cot x \, dx = \ln |\sin x| + C$

3. $\int \sec x \, dx = \ln |\sec x + \tan x| + C$

4. $\int \csc x \, dx = \ln |\csc x - \cot x| + C$

5. $\int \frac{1}{x^2 + a^2} \, dx = \frac{1}{a} \tan^{-1} \left(\frac{x}{a} \right) + C$

Some Trigonometric Identities:

1. $\cos^2(x) + \sin^2(x) = 1$

2. $\tan^2(x) + 1 = \sec^2(x)$

3. $\cot^2(x) + 1 = \csc^2(x)$

4. $\sin(2x) = 2\sin(x) \cos(x)$

5. $\cos(2x) = \cos^2(x) - \sin^2(x)$

6. $\cos(2x) = 1 - 2\sin^2(x)$

7. $\cos(2x) = 2\cos^2(x) - 1$

8. $\cos^2 x = \frac{1}{2}(1 + \cos 2x)$

9. $\sin^2 x = \frac{1}{2}(1 - \cos 2x)$